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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,719	03/04/2004	Hirotsuna Miura	118424	5313
25944 7590 01/30/2007 OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER CREPEAU, JONATHAN	
			ART UNIT	PAPER NUMBER
			1745	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/30/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/791,719	Applicant(s) MIURA, HIROTSUNA	
	Examiner Jonathan S. Crepeau	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 5 and 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9-15-05 3-4-04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in the reply filed on January 11, 2007 is acknowledged. The traversal is on the ground(s) that the restriction requirement does not identify a specific process other than the process of Group I by which the products of Group II can be made. However, the product of Group II can be made by, for example, a molding or etching process. Applicant is reminded that a product defined by the process by which it can be made is still a product claim (*In re Bridgeford*, 357 F.2d 679, 149 USPQ 55 (CCPA 1966)) and can be restricted from the process if the examiner can demonstrate that the product as claimed can be made by another materially different process. This can be demonstrated here, as noted above.

The requirement is still deemed proper and is therefore made FINAL.

Claim Suggestions

2. In claim 4, "the second gas channel defining material" lacks proper antecedent basis. Appropriate correction is suggested but not required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nonoyama et al (U.S. Patent 6,472,094). The reference is directed to a method of manufacturing a fuel cell separator. The method comprises die-molding a plurality of projections (24g) (corresponding to the claimed "channel defining material") onto a substrate (22) (see Fig. 4). The die-molding apparatus corresponds to the claimed "discharger." Regarding claims 2 and 3, Figs. 7-9 of the reference are considered to be anticipatory of the step of "forming the coatings by repeatedly applying the first gas channel defining material using the discharger at regular intervals over areas onto which the gas channel defining layers are formed."

The reference does not teach that its inventive method uses the other steps recited in claim 1, i.e., forming reaction layers, forming current collection layers, and forming an electrolyte membrane.

However, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the reference teaches in Fig. 24 and column 1 the structure of a conventional fuel cell that comprises two separator plates (20), gas diffusion (i.e., current collecting) layers, electrodes (14, 16), and an electrolyte membrane (12). It would have been obvious to use the inventive method of the reference in making separator plates to be used in a fuel cell such as that shown in Fig. 24. The steps of assembling the fuel cell components would read on the steps of "forming" the components as recited in claim 1. As such, the subject matter of claim 1 would be rendered obvious.

Regarding claim 3, the reference teaches a second channel defining material (25) coated onto the first material (see Fig. 4). Both materials are metallic. It would have been obvious, as recited in claim 3, to employ a second material having a lower viscosity than the first material, in order to provide for efficient coating of the projections formed by the first material. Accordingly, the subject matter of claim 3 would be rendered obvious to the skilled artisan.

5. Claims 1, 2, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mukohyama et al (U.S. Patent 5,798,188).

The reference is directed to a method of manufacturing a fuel cell separator. The method comprises injection-molding a plurality of projections (4) (corresponding to the claimed "channel defining material") onto a substrate (2) (see Fig. 1; col. 3, line 12). The injection molding apparatus corresponds to the claimed "discharger." Regarding claim 2, the operation of the injection molding apparatus (see col. 3, lines 12-17) is considered to be anticipatory of the step of "forming the coatings by repeatedly applying the first gas channel defining material using the discharger at regular intervals over areas onto which the gas channel defining layers are formed." Regarding claim 4, the gas channel defining material is a thermosetting resin such as polyamide or polycarbonate (see col. 3, line 42).

The reference does not teach the step recited in claim 1 relating to the use of two substrates, or the steps of forming electrode layers, current collecting layers, and an electrolyte.

However, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because it would be obvious to use a second separator on the other side of the fuel cell unit (8) shown in Fig. 1. Such a separator would have to be present in any stacked configuration; and as such, its use (corresponding to the claimed “second substrate”) would be rendered obvious. Additionally, the method steps in claim 1 directed to “forming” various fuel cell components would be obvious since each of the components is conventional in a fuel cell. At least two electrodes and an electrolyte are shown in Figure 1, and it would further be obvious to employ current collecting layers (gas diffusion layers) to provide for proper gas distribution to the electrodes. Accordingly, the subject matter of claim 1 would be rendered obvious to a skilled artisan.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned

with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1-4 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the claims of copending Application Nos. 10/780,737 and 10/781,752. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending applications anticipate at least claim 1 and render obvious claims 2-4.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at (571) 272-1292. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Art Unit: 1745

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau
Primary Examiner
Art Unit 1745
January 25, 2007